

Vega

A new generation of routing and processing



Snell
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Media



www.s-a-m.com

Routing and processing for all applications

The Vega router series is a powerful suite of routers that delivers superior functionality at price points that suit broadcasters' budgets. The range is divided into the **the Vega 10 Series**, the **Vega MV Series** and the **Vega 100 Series**. They offer different physical interfaces that are all simple to configure and because all the models are easy to install, choosing the appropriate model for your routing needs is never difficult.

Vega is ideal for small to mid-size applications. It comes in a series of frame sizes, from simple fixed hardware for smaller budgets to flexible dynamic routing architecture for more complex productions. Even if you're a novice in the field, Vega's simple design makes the routers straightforward and easy to operate.

The Vega range has extensive redundancy options with dual redundant crosspoints, frame controllers, power supplies and fans. Future-proof and adaptable, the Vega suite is also equipped to handle 4K as standard to give broadcasters a simple transition when moving to 4K.

Key features of the Vega Series include:

- Video routing
- Video routing with clean quiet switching technology, for smooth fade program transitions
- Hybrid audio routing with de-embedding, embedding and discrete audio
- MADI audio inputs and outputs
- Unique input embedding capability
- Line synchronizers
- Integrated multiviewer
- Web configuration

The router in the Vega 10 series is the:

- Vega 30

With MADI interfaces, de-embedding and embedding plus clean and quiet switching and line synchronization the Vega 30 is ideal for small trucks and studios, head ends, bay monitoring, houses of worship and theatre.

Vega 10 Series

A powerful fixed 3RU mainframe with a fixed 34 x 34 video matrix. The 3RU chassis measures at 65mm deep which makes the Vega 10 the perfect router for projects where space is of concern.

Vega MV Series

Vega MV routers are flexible, cost effective, small form factor routers with integrated multi-image displays. Available in a 1RU frame, the Vega MV range is offered as:

- Vega 16MV - 16 x 16 video matrix
- Vega 32MV - 32 x 32 video matrix

The Vega MV range is perfect for space conscious set ups. It provides routing capability and single or multiple displays with fully configurable screen layouts, comprehensive monitoring and alarm capability and simple, intuitive configuration. For those wanting to transition to 4K, the Vega MV Series is 4K capable offering 4K inputs and outputs.

Vega 100 Series

For more complex video and audio routing needs the Vega 100 Series offers modular and flexible software configurable inputs and outputs for asymmetric routing for both coax and fiber I/O and is fully redundant for critical applications.

The Vega 100 Series consists of:

- Vega 200
- Vega 400
- Vega 700

With such a broad range of matrix configurations, the Vega 100 Series is ideal for many small and mid-sized applications including medium and larger OB trucks, news studios, playout centres, theatres, rental & flyaway, houses of worship and studio complexes.

Vega. It sounds simple, but sometimes the simplest solution requires the best insight from the most creative minds.



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For further information on award-winning SAM products visit:

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The Vega Series is available with varying features and specifications

The table below highlights each Vega models attributes.

	Vega 16MV	Vega 32MV	Vega 30	Vega 200	Vega 400	Vega 700
Mainframe	1RU	1RU	3RU	2RU	4RU	7RU
Size Video	16 x 16	32 x 32	34 x 34	1 x 95 to 95 x 1	1 x 191 to 191 x 1	144 x 288 to 288 x 144
Size Audio			736 x 928	960 x 912		
Audio Routing			3 x 6 MADI	6 x 6 MADI		
Audio Interfaces						
MADI			3 in, 6 out	6 in, 6 out, or dual 3 in with auto failover, dual 3 out		
AES			-----	Up to 96 ports	Up to 192 ports	Up to 288 ports
Embedded			34 outputs with 16 audio channels on each	Up to 36 inputs and 33 outputs with 16 audio channels on each		
Processing						
Input Line Sync			-----	√	√	√
De-Embedding	x	x	√	√	√	√
Output Embedding	x	x	√	√	√	√
Output Line Sync	x	x	√	√	√	√
Clean & Quiet Switching Outputs	x	x	√	√	√	√
Multiviewer						
4K Output	√	√				
4K Input	√	√				
UMD	√	√				
Tally	√	√				
Clock	√	√				
Alarms	√	√				
Dolby Metering	√	√				

Features

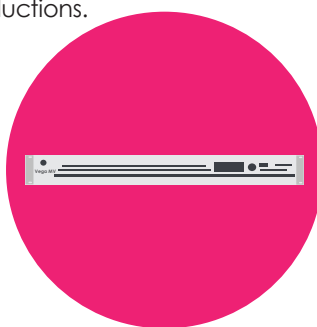
Vega delivers unmatched versatility. The product line accommodates every application from smaller startup projects to larger, more demanding productions.

Each router in the suite offers advanced features when compared to many of the traditional routers on the market today.



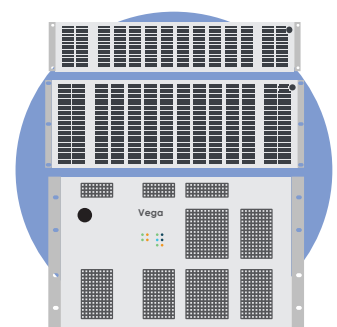
Vega 30 - Small Fixed

- Powerful processing
- Fast configuration
- 4K ready
- Space saving, small form factor
- Cost efficient



Vega MV Series (16/32)

- Powerful processing
- Fast configuration
- 4K ready
- Space saving, small form factor
- Cost efficient
- Integrated Multiviewer for easy monitoring
- Excellent picture quality
- Alarm for fast error detection



Vega 200 - Small Flexible Vega 400 - Medium Flexible Vega 700 - Large Flexible

- Flexibility in small and medium sized routers
- Resilient and reliable
- Versatile and fast configuration
- Fully modular
- Smooth program transitions with clean & quiet switching
- 4K ready

The Vega 10 Series powerful and compact routing

Vega 30

The Vega 30 is available as a fixed, non-modular 3RU frame for video and audio routing with clean and quiet switching. Its simple installation means its great for entry-level start-ups — whether they're in the House of Worship market, the conference and education space, or space-critical flyaway systems.



Features

- Video & audio routing
- Powerful processing
- Fast configuration
- Hardware, softpanel and remote control

Benefits

- Powerful processing capability at a very low cost
- Simple browser configuration
- Flexible control options
- User upgradable
- Space saving, small form factor
- 4K capable

Vega 30 offers:

- Video and Audio routing
 - Clean and quiet switching for smooth transitions
 - De-embedding & embedding
 - MADI with full audio routing
- Mix any of these for ultimate flexibility
- Supports quad link co-timed switching as signal source or destination

The Vega 30 offers different options including:

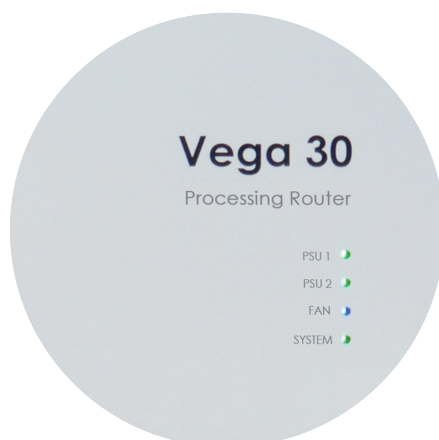
- Audio routing (MADI and embedded)
- De-embedding and embedding for full hybrid routing
- Line synchronizing outputs
- Clean and quiet switching outputs for smooth program transitions
- Dual redundant PSU

Simplified Configuration and Control

The Vega 30 can be configured simply online via a web application.

When control is needed the Vega 30 offers;

- Browser control panel for routing and processing,
- Rollcall interface for Luna panel control,
- General Switcher (SW-P-02) and General Remote (SW-P-08) protocols on Ethernet,
- SNMP control (crosspoint setting) and monitoring (simple PSU/fan fail)



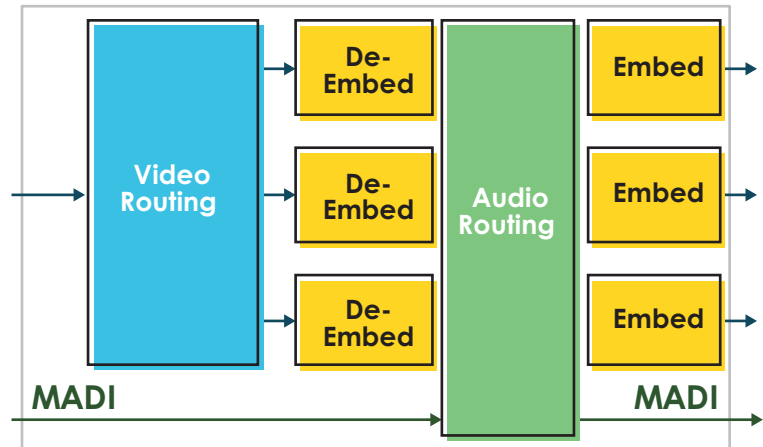
Vega 10 Series hybrid video and audio routing, synchronizer and clean switching

Vega 10 Series Hybrid Video and Audio Routing

The Vega 10 Series is the ideal router solution for live production and OB facilities because it can interface with audio mixing desks, track swapping incoming feeds, route video and audio feeds all with clean and quiet switching.

Offering a simpler solution for video and audio routing the Vega 10 Series has fixed inputs and outputs on a 3RU mainframe. Each audio input (embedded or MADI) can be both routed simultaneously with video feeds. Audio can be embedded on the outputs without the need of external equipment. This makes for a cost effective smaller router with a power level that most routers in its class can't match.

Vega 10 Series - Video & Audio Routing



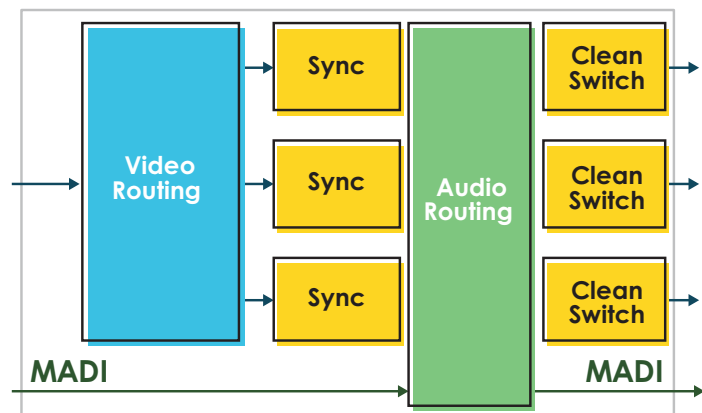
Vega 10 series has the ability to mix both video and audio feeds and embed audio on the outputs when required avoiding using external devices and increased expenditure.

Vega 10 Series Synchronizer and Clean Switching

The Vega range can be equipped with line synchronizer re-timing capability for inputs and outputs. On Vega 10 Series, this is on outputs. This automatically manages any timing differences present on incoming signals and allows timed signal switching in the router.

Clean and quiet switching (CQS) is available throughout the entire Vega range to give you smooth non-visible transitions, as well as to get rid of any noticeable audio clicks and pop interference that may occur on a router switch transition. It also ensures there is no disruption to the video data stream, therefore downstream equipment cannot be disturbed by the transition.

Vega 10 Series - Synchronizing & Clean Switching



The Vega 10 offers full clean and quiet switching on the outputs, eliminating any doubt that there may be disturbance on downstream signals.

Vega 16MV and Vega 32MV - Compact routers with integrated 4K multiviewer

The Vega 16MV and Vega 32MV are cost effective solutions for routing and multi-image displays. Vega MV are standalone routers with integrated multiviewer, ideal for smaller applications such as ENG and small OB vans, Small studios and live productions, or concert venues, houses of worship and conference centres.

Features

- 16 x 16 or 32 x 32 video routing in 1RU
- Integrated Multiviewer with HDMI2 4K and SDI outputs
- Independent routing to router outputs and multiviewer tiles
- Input monitoring, or 'destination follow' mode for output monitoring.
- Extensive alarm capability
 - Video
 - Audio
 - Metadata
- 4K capable inputs
- Multiple input format support
- Ethernet and serial comms to external control systems

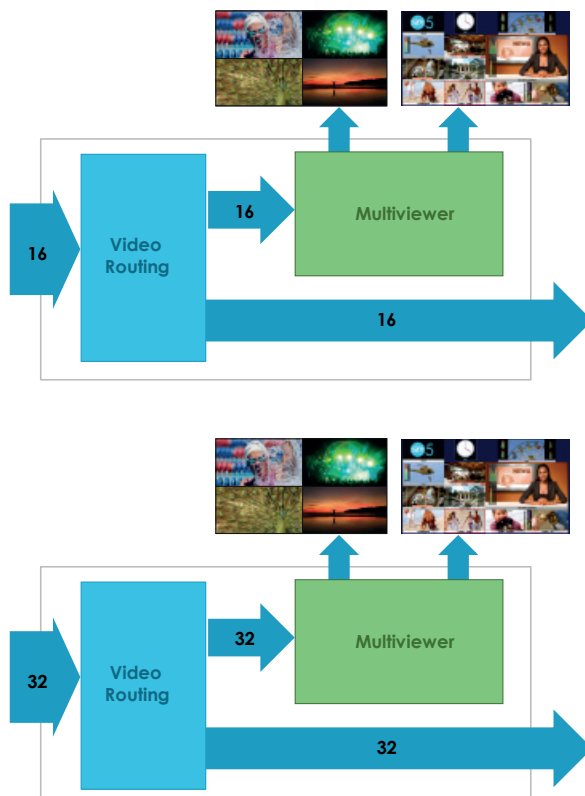
Benefits

- One system for routing and multiviewer
- Space saving, small form factor
- Simple web browser configuration
- Multiple control interfaces, including hardware panels, softpanels, SAM and third party protocols
- Comprehensive monitoring and alarm capability

Vega MV Series Alarms & Indicators

The Vega MV series not only enables fast routing capability with auto detection from SD to 4K but provides high quality video images and will also:

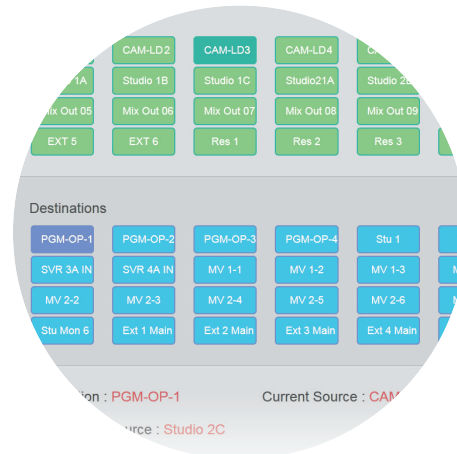
- Generate audio metering of individual channels from AES or Dolby® E
- Auto detect Dolby E formats and adjust bars to suit, or:
- Show incorrect audio formats
- Allow two rows of audio metering for efficient use of display space
- Audio phase indication
- Displays UMD source names from external routers and production switchers
- Show source tallies from tally systems
- Alarm indicator
- Safe area marker
- Real-time clocks or timers
- Allow multiple clocks with timezone offsets
- Display timecode
- Display closed captioning
- Decode and use WSS (wide screen signaling for aspect ratio control)
- Store and display bitmap files e.g. for channel logo images
- Display message boxes containing text, updated from external systems



The Vega MV can be configured simply online via a web application

When control is needed the Vega MV offers;

- Browser control panel for routing and configuration
- Hardware panel control for routing and layout recalls
- General Switcher (SW-P-02) and General Remote (SW-P-08) protocols on Ethernet,
- SNMP control and monitoring



Vega MV Series - Off Air Monitoring



Up to 32 inputs for off-air monitoring.

- Audio loss alarms
- Metadata loss alarms (CC, WSS, V-chip, AFD, etc)
- Simple on screen labelling of sources



Vega MV Series - Outside Broadcast/Live Production

Multi-channel display with graphical background and channel logos for clear identification

- 1U Multiple systems in a single rack allow production switcher live operation, plus multiple quad split monitoring feeds
- Cue lights
- UMD tallies showing switcher and router source name
- Clock
- 4K HDMI out for local monitors, with SDI copy for remote feeds or copies in the trucks



Vega 100 Series Routing Flexibility

The Vega 100 Series is suited to more complex productions that demand the flexibility to manage many different feeds quickly and to route instantly in the event of last-minute changes.

With the Vega 100 Series, any port can be configured as input or output with a choice of coax, fiber or HDMI, which gives users the freedom to customize their router to specific needs.

All inputs and outputs can be configured easily via the software 'Set Up' menu, which allows multi-format, multi-level routing in any combination for both video and audio. All routing in a single chassis simplifies system design and saves on space, power, and costs.

Vega 100 Series Features

- Configurable inputs and outputs
- Mixture of SDI, HD, 3G, coax, fiber and HDMI
- MADI & AES audio – balanced and unbalanced
- De-embedding and embedding for full hybrid routing
- Ultra-resilient – Redundant PSUs, controllers, crosspoints and fans
- A variety of control interfaces
- Fully modular with hot swappable cards, PSUs and fans
- SDI, ASI, 4K capable
- Synchronizing inputs and outputs
- Clean and quiet switching for smooth program transitions on outputs

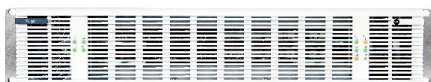
Benefits

- Inherent flexibility in small & medium sized routing applications
- Zero compromise in resilience and redundancy
- Versatility and speed in system configuration

With these functions, the Vega 100 Series provides a powerful option that enables your baseband infrastructure to include a mix of dynamic configurations of mixed video, audio, copper and fiber for both inputs and outputs.

There are three rack sizes in the Vega 100 Series, which means you can use the same modules throughout your application or you can standardize on one size throughout your facility.

Vega 200



2RU
1 x 95 to 95 x 1 video
Square size: 48 x 48

Vega 400



4RU
1 x 191 to 191 x 1 video
Square size: 96 x 96

Vega 700



7RU
144 x 288 to 288 x 144 video
Square size: 216 x 216

Vega 100 Series Input/Output Options

Coax input/output - 12 channels
Fiber, coax or HDMI SFP input/output - 12 channels
AES balanced and unbalanced - 12 channels
Input processing - 9 channels
Output processing - 9 channels
MADI and audio routing - 6 x 6



Vega 100 Series input embedding, audio routing and clean switching

Vega 100 Series Input Embedding and Audio Routing

The Vega 100 series can be equipped with any combination of video and audio modules. It will route any format of video and AES, MADI or embedded or compressed audio in any combination in a single frame, allowing multi-format, multi-level routing. For broadcasters, this means a uniquely flexible architecture for varying applications, such as if they're working in an OB environment, for example:

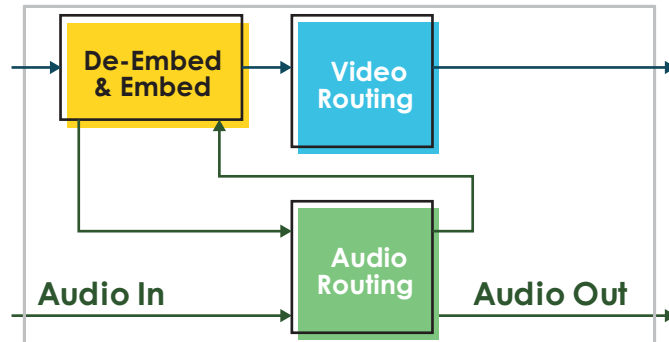
- De-embed audio on processing inputs
- MADI inputs (mixing desk interface)
- AES inputs and outputs
- Stereo routing with mono breakaway
- Input embedding

Vega 100 Series Synchronizer and Clean Switching

The Vega range can be equipped with line synchronizer re-timing capability for inputs and outputs. On Vega 100 Series, both inputs and outputs can be synchronized. This automatically manages any timing differences present on incoming signals, and allows timed signal switching in the router.

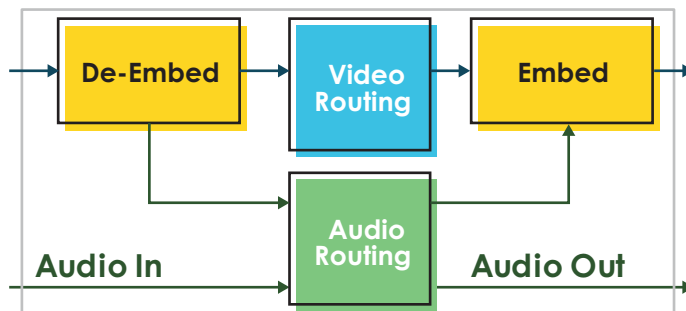
Clean and quiet switching (CQS) is available throughout the entire Vega range to give you smooth non-visible transitions, as well as to get rid of any noticeable audio clicks and pop interference that may occur on a router switch transition. It also ensures there is no disruption to the video data stream, therefore downstream equipment cannot be disturbed by the transition.

Vega 100 Series - Input Embedding & Audio Routing



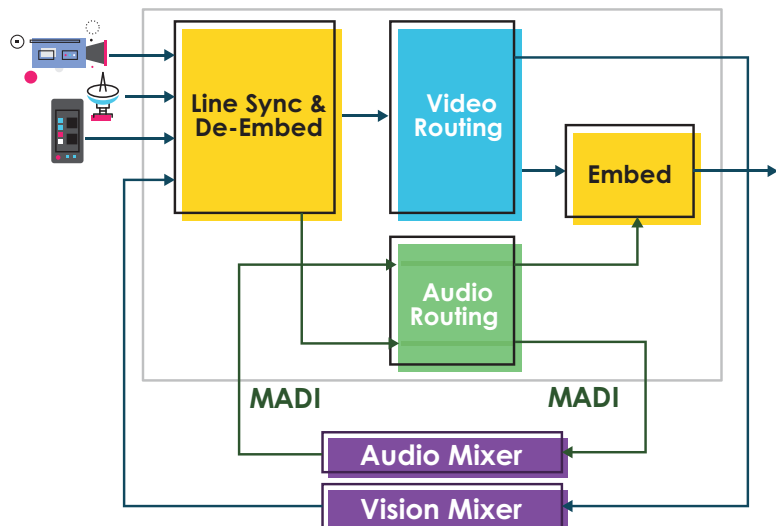
The Vega 100 series can embed audio on both inputs and outputs, allowing for multiple feeds to be configured accordingly. Input embedding is a unique feature of both Vega and Sirius 800. Programs with combinations of video and audio tracks can be created on a router input, rather than the output and wrapping external cables back around to an input. This saves space, power and cost.

Vega 100 Series - Hybrid Video & Audio Routing



The Vega 100 series allows audio to be embedded on both inputs and outputs and it can simultaneously route video and audio. Totally flexible routing of video and audio, together with input embedding, means any signal workflow can be accommodated within the Vega.

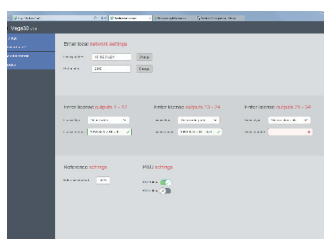
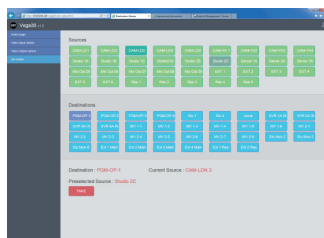
Vega 100 Series - Synchronizing, Hybrid Routing & Clean Switching



Control

The Vega 10 and 100 Series uses web-based control, softpanels and hardware panels to control each router function. A browser launched 'plug-and-play' GUI provides intuitive configuration and control via a PC. In addition, 1RU and 2RU control panels are available for connection over fast Ethernet either directly or via standard hub and/or IP routing devices. Vega uses SAM's external control protocols which means third party control is easy.

Web-based configuration and software control panels



External & 3rd party controller



Hard panels

The **Luna** hard panel range has been designed to make control easy and quick. The Luna panel range offers;

- Destination / Source search keys

Destination / Source search keys enable the user to define 'group or category' keys and use for multiple 'drill down' filters to specific source / destination. Only names in the selected groups will appear on the display for easy viewing.

- Numeric/function keypad

Having numeric keys and 'group' keys allow for specific name filtering. Function keys enable toggle source, destination selection, lock, take plus AHP specific controls as well as clear all and select all function for fast audio track selection.

- Multifunction LCD display

The Multifunction LCD display enables video routing, audio track routing and processing enabling channel control using rotary controls or buttons.

The hard panels consist of:

7028: 1RU Series LED 36 button



6026: 2RU Series X-Y, LCD



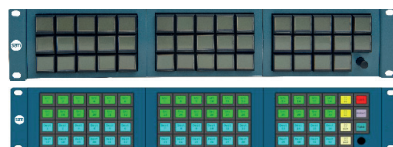
48 LCD button, display



1RU - 15 Key and rotary switch
- 39 Key and rotary switch



2RU - 44 Key and rotary switch
- 71 Key and rotary switch



The New Generation of Vega Routers has Arrived

Vega

Hybrid Video & Audio
Routing from 6 x 6 to
144 x 288

SDI, ASI, AES, MADI,
Embedded, Multiviewers





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